

## **II. AMENDMENTS**

### **IN THE CLAIMS**

1 1-21. (Cancel)

1 22. (Original) A method of facilitating correction of an index after a  
2 reorganization of data in a database, wherein said index comprises index entries, said  
3 database comprises one or more records, each said record comprises one or more segments,  
4 and each index entry comprises an address to a target segment, the method comprising:  
5 prior to a reorganization of data in said database, assigning a unique token to each  
6 target segment and each corresponding index entry having an address to a  
7 target segment, wherein said unique token for a given target segment and for a  
8 corresponding index entry is the same;  
9 after a reorganization of data in said database, reading the unique token of a first  
10 index entry;  
11 reading the unique token of each target segment until a match is found between the  
12 unique token of a matching target segment and the unique token of said first  
13 index entry;  
14 determining the address of said matching target segment; and  
15 replacing the address of said first index entry with the address of said matching target  
16 segment.

1 23. (Cancel)

1 24. (Original) The method of claim 22, wherein said database is an IMS database.

1 25. (Cancel)

1 26. (Original) A method of facilitating correction of an index after a  
2 reorganization of data in a database, wherein said index comprises index entries, said  
3 database comprises one or more records, each said record comprises a root segment and one  
4 or more non-root segments, and each index entry comprises an address to a target segment  
5 included within said root and non-root segments, the method comprising:

6 prior to a reorganization of data in said database, assigning a unique token to each  
7 target segment and each corresponding index entry having an address to a  
8 target segment, wherein said unique token for a given target segment and for a  
9 corresponding index entry is the same;  
10 after a reorganization of data in said database, reading the unique token of a first  
11 index entry for a first record;  
12 reading the unique token of each non-root segment within said first record until a  
13 match is found between the unique token of a matching target segment and the  
14 unique token of said first index entry;  
15 determining the address of said matching target segment; and  
16 replacing the address of said first index entry with the address of said matching target  
17 segment.

1 27. (Original) The method of claim 26, wherein said index which is to be  
2 corrected is a secondary index.

1 28. (Original) The method of claim 26, wherein said database is an IMS database.

1 29. (Original) The method of claim 27, wherein said database is an IMS database.

1 30. (Original) The method of claim 26, wherein each said unique token includes  
2 one or more the following: (i) a born on date of the target segment to which said unique  
3 token is assigned; or (ii) a key field of the target segment to which said unique token is  
4 assigned.

1 31. (Original) A method of facilitating correction of an index after a  
2 reorganization of data in a database, wherein said index comprises index entries, said  
3 database comprises one or more records, each said record comprises a root segment and one  
4 or more non-root segments, and each index entry comprises an address to a target segment  
5 included within said root and non-root segments, wherein said root segment and one or more  
6 non-root segments for a record are stored within a block of storage locations, the method  
7 comprising:

8 prior to a reorganization of data in said database, assigning a unique token to each  
9 target segment and each corresponding index entry having an address to a

10 target segment, wherein said unique token for a given target segment and for a  
11 corresponding index entry is the same;  
12 after a reorganization of data in said database, reading the unique token of a first  
13 index entry for a first record;  
14 reading the unique token of each non-root segment within said first record until a  
15 match is found between the unique token of a matching target segment and the  
16 unique token of said first index entry;  
17 determining the address of said matching target segment; and  
18 replacing the address of said first index entry with the address of said matching target  
19 segment.

1 32. (Original) The method of claim 31, wherein said index which is to be  
2 corrected is a secondary index.

1 33. (Original) The method of claim 31, wherein said database is an IMS database.

1 34. (Original) The method of claim 32, wherein said database is an IMS database.

1 35. (Original) The method of claim 31, wherein each said root segment is stored  
2 in a fixed storage location prior to a reorganization of data in said database, and said root  
3 segment is retained in said fixed storage location during a reorganization.

1 36. (Original) The method of claim 31, wherein each said unique token is  
2 includes one or more the following: (i) a born on date of the target segment to which said  
3 unique token is assigned; or (ii) a key field of the target segment to which said unique token  
4 is assigned.

1 37. (Original) A method of facilitating correction of an index after a  
2 reorganization of data in a database, wherein said index comprises index entries, said  
3 database comprises one or more records, each said record comprises a root segment and one  
4 or more non-root segments, each root and non-root segment comprises a prefix component  
5 and a data component, and each index entry comprises an address to the prefix component of  
6 a target segment included within said root and non-root segments, the method comprising:

7 prior to a reorganization of data in said database, assigning a unique token to the  
8 prefix component of each target segment and each corresponding index entry  
9 having an address to the prefix component of a target segment, wherein said  
10 unique token for the prefix component of a given target segment and for a  
11 corresponding index entry is the same;  
12 after a reorganization of data in said database, reading the unique token of a first  
13 index entry for a first record;  
14 reading the unique token of the prefix component of each non-root segment within  
15 said first record until a match is found between the unique token of a matching  
16 target segment prefix component and the unique token of said first index  
17 entry;  
18 determining the address of said matching target segment prefix component; and  
19 replacing the address of said first index entry with the address of said matching target  
20 segment prefix component.

1 38. (Original) The method of claim 37, wherein said index which is to be  
2 corrected is a secondary index.

1 39. (Original) The method of claim 37, wherein said database is an IMS database.

1 40. (Original) The method of claim 37, wherein each said root segment is stored  
2 in a fixed storage location prior to a reorganization of data in said database, and said root  
3 segment is retained in said fixed storage location during a reorganization.

1 41. (Original) The method of claim 37, wherein each index entry and each non-  
2 root target segment further comprise a root segment identifier which identifies what root  
3 segment said non-root target segment is associated with, and each identified root segment  
4 comprises addresses to all non-root segments, within a record, associated with said identified  
5 root segment.

1 42. (Original) The method of claim 41, wherein each said unique token includes  
2 one or more the following: (i) a born on date of the target segment to which said unique  
3 token is assigned; or (ii) a key field of the target segment to which said unique token is  
4 assigned.

1           43.     (Original) The method of claim 42, wherein each said unique token for an  
2 index entry and each non-root target segment further comprises said root segment identifier  
3 which identifies what root segment said non-root target segment is associated with.

1           44.     (Original) The method of claim 41, wherein said database is an IMS database.

1           45.     (Original) The method of claim 41, wherein said index which is to be  
2 corrected is a secondary index.

1           46.     (Original) The method of claim 37, wherein each said unique token includes  
2 one or more the following: (i) a born on date of the target segment to which said unique  
3 token is assigned; or (ii) a key field of the target segment to which said unique token is  
4 assigned.

1           47.     (Original) The method of claim 22, wherein after a reorganization of data in  
2 said database but before taking steps to correct said address of said first index entry,  
3 determining if said address of said first index entry is valid and then correcting said address  
4 only if it is invalid.

1           48.     (Original) The method of claim 47, wherein determining if said address of  
2 said first index entry is valid comprises comparing the unique token of said first index entry  
3 to the unique token associated with a segment located at said address, and ascertaining if said  
4 unique tokens are the same.

1           49.     (Original) The method of claim 47, wherein determining if said address of  
2 said first index entry is valid comprises comparing a segment code of said first index entry to  
3 a segment code associated with a segment located at said address, and if said segment codes  
4 are the same, then comparing the unique token of said first index entry to the unique token  
5 associated with said segment located at said address, and ascertaining if said unique tokens  
6 are the same.

1           50.     (Original) The method of claim 26, wherein after a reorganization of data in  
2 said database but before taking steps to correct said address of said first index entry,

3 determining if said address of said first index entry is valid and then correcting said address  
4 only if it is invalid.

1 51. (Original) The method of claim 50, wherein determining if said address of  
2 said first index entry is valid comprises comparing the unique token of said first index entry  
3 to the unique token associated with a segment located at said address, and ascertaining if said  
4 unique tokens are the same.

1 52. (Original) The method of claim 50, wherein determining if said address of  
2 said first index entry is valid comprises comparing a segment code of said first index entry to  
3 a segment code associated with a segment located at said address, and if said segment codes  
4 are the same, then comparing the unique token of said first index entry to the unique token  
5 associated with said segment located at said address, and ascertaining if said unique tokens  
6 are the same.

1 53. (Original) The method of claim 31, wherein after a reorganization of data in  
2 said database but before taking steps to correct said address of said first index entry,  
3 determining if said address of said first index entry is valid and then correcting said address  
4 only if it is invalid.

1 54. (Original) The method of claim 53, wherein determining if said address of  
2 said first index entry is valid comprises comparing the unique token of said first index entry  
3 to the unique token associated with a segment located at said address, and ascertaining if said  
4 unique tokens are the same.

1 55. (Original) The method of claim 53, wherein determining if said address of  
2 said first index entry is valid comprises comparing a segment code of said first index entry to  
3 a segment code associated with a segment located at said address, and if said segment codes  
4 are the same, then comparing the unique token of said first index entry to the unique token  
5 associated with said segment located at said address, and ascertaining if said unique tokens  
6 are the same.

1 56. (Original) The method of claim 37, wherein after a reorganization of data in  
2 said database but before taking steps to correct said address of said first index entry,

3 determining if said address of said first index entry is valid and then correcting said address  
4 only if it is invalid.

1 57. (Original) The method of claim 56, wherein determining if said address of  
2 said first index entry is valid comprises comparing the unique token of said first index entry  
3 to the unique token associated with a prefix component of a segment located at said address,  
4 and ascertaining if said unique tokens are the same.

1 58. (Original) The method of claim 56, wherein determining if said address of  
2 said first index entry is valid comprises comparing a segment code of said first index entry to  
3 a segment code associated with a prefix component of a segment located at said address, and  
4 if said segment codes are the same, then comparing the unique token of said first index entry  
5 to the unique token associated with said prefix component of a segment located at said  
6 address, and ascertaining if said unique tokens are the same.

1 59-62. (Cancel)

1 63. (Original) A program storage media readable by a machine and containing  
2 instructions for performing the method contained in claim 22.

1 64. (Original) A program storage media readable by a machine and containing  
2 instructions for performing the method contained in claim 26.

1 65. (Original) A program storage media readable by a machine and containing  
2 instructions for performing the method contained in claim 31.

1 66. (Original) A program storage media readable by a machine and containing  
2 instructions for performing the method contained in claim 37.